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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/660,394	09/12/2000	Tsunemori Yoshida		6909

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EXAMINER

WEINER, LAURA S

ART UNIT PAPER NUMBER

1745

DATE MAILED: 02/01/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/660,394	<b>Applicant(s)</b> YOSHIDA	
	<b>Examiner</b> Laura S Weiner	<b>Art Unit</b> 1745	

FD-2

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) ☒ Responsive to communication(s) filed on 12 September 2000.

2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) ☒ Claim(s) 1-15 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.

6) ☒ Claim(s) 1-15 is/are rejected.

7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.

8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on 12/1 is: a) ☐ approved b) ☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All   b) ☐ Some \*   c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____	6) <input type="checkbox"/> Other: _____

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## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is rejected because it is unclear what is meant by "bonding graphite powder by means of a thermosetting resin". It is unclear what the graphite powder is bonded to.

Note: The *[italics portion]* denotes the claimed language.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

(f) he did not himself invent the subject matter sought to be patented.

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3. Claims 1, 3, 5, 8, 10-11 are provisionally rejected under 35 U.S.C. 102(e) as being anticipated by copending Application No. 09/660,291 which has a common inventor and assignee with the instant application.

Based upon the earlier effective U.S. filing date of the copending application, it would constitute prior art under 35 U.S.C. 102(e), if patented. This provisional rejection under 35 U.S.C. 102(e) is based upon a presumption of future patenting of the copending application.

This provisional rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the copending application was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

This rejection may not be overcome by the filing of a terminal disclaimer. See *In re Bartfeld*, 925 F.2d 1450, 17 USPQ2d 1885 (Fed. Cir. 1991).

4. Claims 1, 3-4, 7-8 are rejected under 35 U.S.C. 102(f) because the applicant did not invent the claimed subject matter.

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5. Claims 1-2, 6-9, 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Saito et al. (6,242,124).

Saito et al. teaches a separator for a polymer electrolyte fuel cell in which the separator is made from a carbon composite material comprising (a) 100 parts by weight of an expanded graphite powder [62-91 %] and (b) 10-45 parts by weight of a thermosetting resin [9-28 %] dispersed in the expanded graphite powder wherein the graphite powder has an average particle diameter of 5-12 um and at least 80% of the total particles of the expanded graphite powder have particle diameters of 0.1-20 um. Saito et al. teaches in column 4, lines 52-56, that the thermosetting resin can be a polycarbodiimide resin, a phenolic resin, a furfuryl alcohol resin, an epoxy resin, urea resin, a melamine resin, or the like. Saito et al. teaches in column 6, lines 3-10, a composition comprising expanded graphite and a thermosetting resin shown in Table 1 was mixed and molded at a pressure of 100 kg/cm<sup>2</sup> [9.81 MPa which rounds up to 10 MPa] into a separator shape.

6. Claims 1-2, 5-9, 11-15 are rejected under 35 U.S.C. 102(e) as being anticipated by Braun et al. (6,180,275).

Braun et al. teaches in column 5, lines 43-49, a composition containing 45-95 wt% graphite powder [85-97 wt%], 5-50 wt% polymer resin [3-15 wt%] and 0-20 wt% metallic fiber, carbon fiber and/or carbon nanofiber. Braun et al. teaches in column 4, lines 66-67, that the

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graphite powder has an average particle size of 23-26  $\mu\text{m}$  [15-125  $\mu\text{m}$ ]. Braun et al. teaches in column 5, line 50 to column 6, line 4, that the composition is formed into a composite having a desired geometry by compression molding, injection molding or a combination. In the case of compression molding, the graphite and polymer powders are blended together and compressed using a pressure of 5-100  $(10)^6 \text{ N/m}^2$  (5-100 MPa), and put under a pressure of 1-15  $(10)^6 \text{ N/m}^2$  (1-15 MPa) then the pressure was increased to 5-75  $(10)^6 \text{ N/m}^2$  (5-75 MPa). Then the mold is cooled to a temperature in the range of 80-250 degrees C [150-170 degrees C]. Braun et al. teaches in column 2, lines 65-67, that the polymer can be phenolic, a polyester, etc.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 3-4, 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Braun et al. (6,180,275) in view of Uemura et al. (4,737,421).

Braun et al. teaches in column 5, lines 43-49, a composition containing 45-95 wt% graphite powder [60-90 wt%], 5-50 wt% polymer resin [10-40 wt%] and 0-20 wt% metallic fiber, carbon fiber and/or carbon nanofiber. Braun et al. teaches in column 4, lines 66-67, that the

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graphite powder has an average particle size of 23-26  $\mu\text{m}$  [15-125  $\mu\text{m}$ ]. Braun et al. teaches in column 5, line 50 to column 6, line 4, that the composition is formed into a composite having a desired geometry by compression molding, injection molding or a combination. In the case of compression molding, the graphite and polymer powders are blended together and compressed using a pressure of 5-100  $(10)^6 \text{ N/m}^2$  [5-100 MPa], the put under a pressure of 1-15  $(10)^6 \text{ N/m}^2$  [1-15 MPa] then the pressure was increased to 5-75  $(10)^6 \text{ N/m}^2$  [5-75 MPa]. Braun et al. teaches in column 2, lines 65-67, that the polymer can be phenolic, a polyester, etc.

Braun et al. teaches the claimed invention expect does not teach that the graphite powder had a average particle diameter of 40-100  $\mu\text{m}$ .

Uemura et al. teaches in column 7, lines 31-60, Examples 4 and 5, a fuel cell separator comprising a separator comprising fibrous cellulose, graphite powder, 44  $\mu\text{m}$  or less and a phenol resin.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a graphite powder with a diameter of 44  $\mu\text{m}$  or less because Uemura et al. teaches this is known in a separator composition comprising a phenol resin and since it has been held that where general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

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### ***Double Patenting***

9. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

10. Claims 1, 3, 5, 8, 10-11 are directed to the same invention as that of claims 7-8 of commonly assigned 09/660,291. The issue of priority under 35 U.S.C. 102(g) and possibly 35 U.S.C. 102(f) of this single invention must be resolved.

Since the Patent and Trademark Office normally will not institute an interference between applications or a patent and an application of common ownership (see MPEP § 2302), the assignee is required to state which entity is the prior inventor of the conflicting subject matter. A terminal disclaimer has no effect in this situation since the basis for refusing more than one patent is priority of invention under 35 U.S.C. 102(f) or (g) and not an extension of monopoly.

Failure to comply with this requirement will result in a holding of abandonment of this application.

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11. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

12. Claims 1, 3, 5, 8, 10-11 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 7-8 of copending

Application No. 09/660,291. Although the conflicting claims are not identical, they are not

patentably distinct from each other because the copending application claims the same fuel cell separator having overlapping composition ratios having a graphite powder with an average diameter of 15-125 um and molding with a pressure of 10-100 MPa.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

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13. Claims 1 and 6 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 7 of copending Application No. 09/685,093 in view of Saito et al. (6,242,124) or Braun et al. (6,180,275).

The copending application claims the claimed invention but does not claim that the graphite powder has a diameter in the range of 15-125  $\mu\text{m}$ .

Saito et al. teaches that at least 80% of the total particles of the expanded graphite powder have particle diameters of 0.1-20  $\mu\text{m}$ .

Braun et al. teaches in column 4, lines 66-67, that the graphite powder has an average particle size of 23-26  $\mu\text{m}$ .

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a diameter of graphite powder in the range of 15-26  $\mu\text{m}$  because Saito et al. or Braun et al. teaches this is known in a separator composition comprising a thermosetting resin and since it has been held that where general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

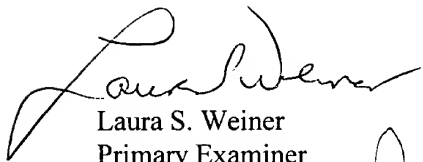
This is a provisional obviousness-type double patenting rejection.

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14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura Weiner whose telephone number is (703) 308-4396. The examiner works a flexible schedule.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gabrielle Brouillette, can be reached at (703) 308-0756. The official fax phone number for the organization where this application or proceeding is assigned is (703) 305-7718.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



Laura S. Weiner  
Primary Examiner  
Art Unit 1745  
January 28, 2002